

**Alaska Energy Authority & Denali Commission**

**Emerging Energy Technology Fund Progress Report**

**Grant Number** 7310051

**Project title:** Wind Diesel Battery Hybrid for Kwigillingok

**Grantee:** Intelligent Energy Systems

**Reporting Period:** Q4 2014 October1, 2014 to December 31, 2014

**Deliverables Submitted:** The following Deliverables have been submitted in this quarter:

- BESS performance report #1
- Data files corresponding to the BESS report

**Budget:** The project remains completable under existing grant funds.

**Schedule Status:** Project continues to move forward with the data collection and analysis.

**Percent Complete: 85%**

Milestone	Task		Deliverables	Status
	1	Complete site design	System one-line, site agreement, instrumentation plan	100% Complete
	2	Battery shelter procurement		100% Complete
	3	Factory acceptance testing	Acceptance results report	100% complete
	4	Procure remaining equipment		100% complete
	5	Deliver materials to site		99% complete
	6	Install instrumentation and collect baseline data		In progress
	7	Installation and commissioning	Commissioning report	95%
	8	Long term system monitoring		In progress
	9	Economic analysis	Economic analysis	In progress
	10	System modeling	Modeling summary report	In progress
	11	Data evaluation and draft project report	Draft project report	
	12	Final project report	Final report	

**Work Progress:** The following site work occurred:

- BESS commissioning continued including diesels off at the powerhouse. Data and supplemental BESS performance report submitted for time periods 11-1-15 thru 11-15-14. This period of time included 8 diesels off events.

- The Continued process of stabilizing the diesel gen sets at Kwig Power plant has significantly effected the BESS usage this quarter.

### **Additional Site activities**

- Generator #3 and #2 in the powerhouse went down for maintenance from 11-15-14 until 1-13-15. This stopped all wind power integration. The two remaining gensets in the powerhouse do not integrate with the wind because of their size and antiquity. Commissioning on the BESS was halted until the powerhouse was stabilized.
- **Future work:** The final phase of Commissioning continues on the BESS system. This phase is wind event dependent to confirm PLC logic. Data collection continues. Data reporting templates are being developed.